

REMARKS

The application has been thoroughly reviewed in light of the October 20, 2004, Office Action. Claims 1-29 are pending, with claims 1, 14, 22 and 26 being independent. Claims 1, 5, 8, 9, 14, 22 and 26 been amended. Each of the issues raised in the outstanding Office Action are addressed below.

Drawing And Specification Objections

The drawings and specification were objected to for the informalities set out on pages 2-5 of the Action. Applicant have provided new formal drawings and/or amended the specification to address these informalities. No new matter has been added. Accordingly, withdrawal of these objections are respectfully requested.

Claim Objections/Rejections Under 35 U.S.C. §112, 2nd paragraph

Claims 1, 5, 8, 9, 14, 22 and 26 were objected to for the informality noted on pages 5-6 of the Action. Applicants have amended these claims to correct said informalities, and now respectfully submit that these claims fully conform with the requirements of §112, second paragraph. Withdrawal of the claims objections and rejection under §112 is respectfully requested.

Claim Objections

Claims 7 and 37 were objected to for the informalities noted on page 2 of the Action. Applicants have amended these claims to address the informalities and respectfully submit that these claims, as well as all the claims now pending, fully conform to the requirements of 35 U.S.C. §112, first paragraph. Accordingly, withdrawal of the claims objections is now respectfully requested.

Prior Art Rejections

Claims 1, 2, 5, 7-21 and 26-29 were rejected under 35 U.S.C. §102 as being anticipated by U.S. patent no. 4,913,266 (Russell et al.). Claims 1, 3 and 4 were rejected under §102 as being anticipated by German patent document no DE3216108 (DE'108). Claims 22-25 were rejected as being obvious under 35 U.S.C. §103 over Russell et al. in view of U.S. patent no. 6,367,598 (Sprozynski). For the following reasons, Applicant respectfully submits that claimed invention is patentable over the prior art.

Applicant respectfully points out that with respect to the §103 rejection of claims 22-25, Applicant amended claim 22 to eliminate the caliper and disc brake pad features. These features were the only reason behind the Action's setting out the §103 rejection (Russell et al. did not disclose such features). Thus, the §103 rejection is now considered moot, and Applicants have distinguished claims 22-25 from Russell et al. without reliance on the eliminated features.

Amended independent claim 1 is directed to a brake rotor including a central mounting portion for mounting the brake rotor on a hub, a first annular braking surface and a second annular braking surface, where each braking surface includes an inner diameter and an outer diameter, a bridge provided between the central mounting portion and a respective inner diameter of at least one of the first and the second annular braking surfaces, and a plurality of ribs positioned proximate to the bridge. The central mounting portion, the braking surfaces, the bridge and the ribs are formed in a single piece. Independent claims 14, 22 and 26 recite similar patentable features.

The present invention presents a single-piece disc brake rotor design, which utilizes reinforcing ribs to a bridge section located between a central mounting portion and an inner diameter to a braking surface. The ribs strengthen the bridge section, and is especially useful in modified brake rotors of less mass. In addition, the ribs may be used to address increased stress on larger diameter disc brake rotors, where such rotors (for example) are subject to increased stress (see specification, page 3, lines 5-12; see also any of Figs. 1B and 2B, for example; see also priority document 60/466,609).

As understood by Applicant, Russell et al. is directed to a braking disc which includes an annular disc member having a plurality of radially inwardly projecting lugs, located coaxially with respect to a central hub member. The hub member includes a number of radially outwardly projecting lugs, the lugs on the hub member being located between adjacent lugs on the annular disc member. The lugs on the two members are interconnected by a resilient member which flexes radially, to allow for thermal expansion.

As also understood by Applicant, DE'108 appears to be directed to a disc brake similar to that of Russel et al. Specifically, DE'108 appears to disclose a first part, that of a disc brake having an annular braking portion (3), a second part including a central mounting portion (2) which is affixed to the first section via a third part including a ring member (29).

A careful review by Applicant of the two cited references failed to turn up any disclosure, or teach or suggest for that matter, of a single piece disc brake rotor, where an inner diameter of a braking surface, a bridge section and a central mounting section are manufactured of a single piece (in the present application – such a rotor may be manufactured from cast iron). Russell et al. discloses a four-piece brake rotor, where a mounting section is mounted to an annular braking disc via two resilient members. Similarly, DE'108 discloses a similar system, but instead uses what appears to be a ring (possibly a flexible “spring” based ring), which appears¹ to lock an annular braking disc to a central mounting portion.

Thus, Applicants respectfully submit that either cited reference fails to disclose each and every feature of the independent claims, and thus, neither reference anticipates the claimed invention. For at least the above reasons, the independent claims are patentable over the cited references. Since the prior art of record fails to meet the deficiencies of either Russell et al. or DE'108, the independent claims are also patentable over the prior art of record.

The remainder of the claims are dependent from one or another of the prior art of

¹ Since Applicant was not provided with an English translation, Applicant could only interpret the reference based on the figures of that reference.

record. Thus, the dependent claims necessarily incorporate by reference all the features recited in their corresponding base independent claims. Thus, the dependent claims are patentable for the same reasons.

CONCLUSION

In view of the foregoing amendments and remarks, Applicant submits that the issues raised in the outstanding Action has all been addressed. Accordingly, Applicant respectfully requests favorable consideration of the pending claims and early passage to issue of the present application.

Applicant stresses to the Examiner that should the Examiner find the now pending claims of the present application not allowable for prior art reasons, that the Examiner contact the Applicant's below named representative to discuss the Examiner's existing or new position with respect to patentability over the prior art. Applicant respectfully requests this so as to obtain allowable claims at the earliest possible time.

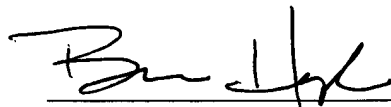
No fee is currently due for the present response. However, in the event that it is determined that additional fees are due, the Commissioner is hereby authorized to charge the undersigned's Deposit Account No. 50-0311. Ref. No. 26571-502.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 935-3000. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

Dated: January 6, 2005

Mintz Levin Cohn Ferris
Glovsky & Popeo, P.C.
The Chrysler Center
666 Third Avenue, 24th Floor
New York, New York 10017
Tel: (212) 935-3000
Fax: (212) 983-3115



Brian P. Hopkins, Reg. No. 42,669
Attorney for Applicant